

## Ch 10 Review

## 10.1 Exponential Functions

- graphs
- write equations  $y = ab^x$
- change base

## 10.2 Logarithmic and Exponential forms

- switching between the forms
- inverse properties  $\log_3 9 = 2$   
 $9^{\log_3 5} = 5$

## 10.3 Properties of Logs

- +  $x$

- $\div$  -  $\log 4x = 16$   
 $10^{16} = 4x$
- power rule

$$\begin{aligned} \log 4x + \log x &= \log 16 \\ \log 4x^2 &= \log 16 \\ 4x^2 &= 16 \\ x^2 &= 4 \\ x &= \pm 2 \\ x &= 2 \end{aligned}$$

## 10.4 Common Logs

- change of base formula
- word problems, pH,  $I_0$ , richter

$$\rightarrow \log_5 3 = \frac{\log 3}{\log 5}$$

10.5 e &  $\ln$ 

- Compound continuously

$$A = Pe^{rt}$$

$$\text{Interest } A = P\left(1 + \frac{r}{n}\right)^{nt}$$

## 10.6 Growth and Decay

- word

$$y = ae^{\pm kt}$$

$$y = a(1 \pm r)^t$$

## Review problems

p571

#s 1-8, 11, 12, 13-27 odd, 28, 29

p570

#s 63-65

p568

#s 24-27